METHODS FOR PREPARING RESOURCE ESTIMATES

Bottoms-Up Technique

Generally a work statement and set of drawings or specifications are used to "takeoff" material quantities required to perform each discrete task performed in accomplishing a given operation or producing and equipment component. From these quantities, direct labor, equipment, and overhead costs are derived and added thereto.

Specific Analogy Technique

Specific analogies depend upon the known cost of an item used in prior systems as the basis for the cost of a similar item in a new system. Adjustments are made to known costs to account for differences in relative complexities of performance, design and operational characteristics.

Parametric Technique

Parametric estimating requires historical data bases on similar systems or subsystems. Statistical analysis is performed on the data to find correlations between cost drivers and other systems parameters, such as design or performance parameters. The analysis produces cost equations or cost estimating relationships which can be used individually or grouped into more complex models.

Cost Review and Update Technique

An estimate is constructed by examining previous estimates of the same program/project for internal logic, completeness of scope, assumptions, and estimating methodology. The estimates are then updated to reflect the cost impact of new conditions or estimating approaches.

Trend Analysis Technique

A contractor efficiency index is derived by comparing originally projected contract costs against actual costs on work performed to date. The index is used to adjust the cost estimate of work not yet completed.

Expert Opinion Technique

May be used when other techniques or data are unavailable. Several specialists can be consulted retroactive until a consensus cost estimate is established.

Source: DOE Order 5700.2C. Cost Estimating, Analysis and Standardization.